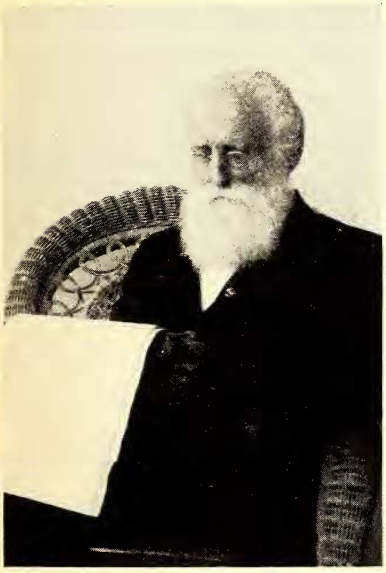
THE BOTANICAL EXPLORERS OF CALIFORNIA.—VII.

Willis Linn Jepson

Joseph Cook Nevin

About a half century ago J. C. Nevin discovered in the Tujunga Wash on the east side of the San Fernando Valley near Los Angeles a remarkable shrub. He sent material of it to Asa Gray who published it as new in the Synoptical Flora of North America (1[1]:69) under the name Berberis Nevinii. It is, doubtless, the rarest of all Californian shrubs as to number of individuals, and is today known from only two restricted stations, the one named above, the other being in the Arroyo Seco on the way to Devil's Gate where it was found by Frank W. Peirson.



(About 1912)
Joseph Cook Nevin

Nevin spent his early life near Pittsburg, Pennsylvania, where he was born January 6, 1835. Educated to be a missionary, he was sent to China in 1859 where he remained for seventeen years, became a scholarly Chinese linguist and translated portions of the Bible into Chinese. These translations are still in use. In 1878 he returned to the United States and took up his residence in Los Angeles. It is said that he turned to botany as a relief from the strain imposed by the intense study of the Chinese language. At any rate his activity attracted the attention of botanists and here in Los Angeles he was visited by Asa Gray and C. C. Parry. Among his botanical associates in Southern California were S. B. Parish, Daniel Cleveland and Anstruther Davidson. With his fellow townsman, W. S. Lyon, discoverer of the remarkable Catalina Ironwood (Lyonothamnus floribundus Gray), he became fast friends and together they made an excursion to San Clemente Island on which they spent four days in April, 1885, the first time it had been visited by botanists. Lyon and his companion were much excited over their finds on this unexplored island in the sea and Lyon, in high elation with their discoveries, wrote to E. L. Greene, "Nevin and I hot from Clemente" (Botanical Letters of Other Days, 101, 140. ms.). One of their new plants was named by Asa

Madroño, vol. 2, pp. 25-32. Oct. 3, 1931.

Gray as Eriophyllum Nevinii, the foliage of which, says Mrs. Blanche Trask,[2] who studied it on Santa Catalina Island at a later date, gleams like frost work on the cliff-sides. Another discovery on San Clemente was Gilia Nevinii Gray.

From 1878 until his death on May 14, 1913, Dr. Nevin was a resident of Los Angeles and continued to collect new and notable plants, mostly very narrow endemics. Near the Hot Springs at San Juan Capistrano he gathered in October, 1881, a peculiar crassulaceous plant which Sereno Watson named Cotyledon viscida (Proc. Am. Acad. 17:372), and in the Santa Clara River Valley at Newhall he fell in with another striking species, to be called Brickellia Nevinii by Gray.

The language acquirements of Dr. Nevin should be noted. A graduate of Jefferson College at Cannonsburg, Pennsylvania, in 1854 and of the Allegheny Seminary in 1858, he knew Hebrew, Greek and Latin and possessed a fair reading knowledge of German, French and Spanish. He himself felt that if he had any strong natural aptitude it was for mathematics. On account of his linquistic attainments Westminster College in western Pennsylvania conferred on him the degree of Doctor of Laws about 1895. It was in about this same year that he presented to that institution his library and his herbarium of about two thousand specimens.

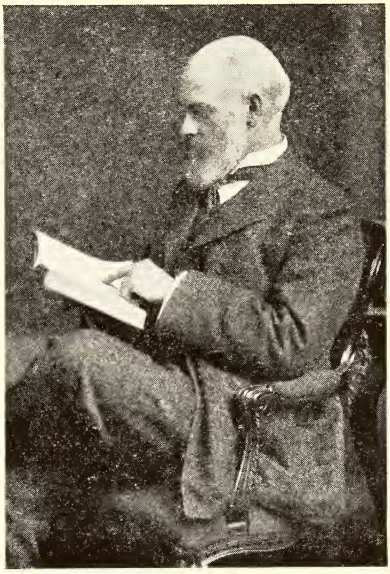
[For further details of his life see The United Presbyterian for July 24, 1913 and a biographical sketch by Fordyce Grinnell in the Bulletin of the Southern California Academy of Sciences, vol. 12, pp. 42-43,—1913. The portrait in this issue of Madroño was taken at his home in Los Angeles about 1912.]

William Hillman Shockley

On the northeastern borders of Inyo County and southeastern Mono County, California, lies a desert range known as the White Mountains. It is a typical Great Basin or desert range and hence much like the north and south ranges in Nevada topographically. The culminating point in the range, White Mountain Peak, is the third highest point in California, so that in spite of a distant appearance of barrenness and monotony, the White Mountains have great interest in their native vegetation. The first botanical explorer to collect in them was William Hillman Shockley, a mining engineer, one of whose hobbies was botany. He resided at Candelaria, Nevada, from 1880 to 1893, and during this time made a number of excursions into the high parts of the White Mountains, as well as making many other collecting trips in western Nevada. Duplicates of his specimens were sent to the Gray Herbarium and a number of new species described from them. He discovered near Candelaria a new Composite which Asa Gray published as Acamptopappus Shockleyi (Proc.

[2] Erythea 7:139.

Am. Acad. 17:208). Sereno Watson named as new Lupinus Shockleyi (Proc. Am. Acad. 22:470), which Shockley collected at Soda Springs, Esmeralda County, and Ivesia Shockleyi (Potentilla Shockleyi) which he found at 13,000 feet, in the White Mountains. His collections, while not extremely extensive, were substantial and furnished many new facts regarding occurrence and distribution of species in the region. His herbarium is now at Berkeley.



William Hillman Shockley

W. H. Shockley was born at New Bedford, Massachusetts, September 18, 1855. He came of a sea-faring race, captains of whaling ships and the like, and traced back his ancestry to John Alden of the ship Mayflower. From such ancestors he may have obtained the lust of the Romany patteran, for, following his graduation from the Massachusetts Institute of Technology in 1875, he traveled over the earth in all continents and many lands in his capacity as a mining engineer. One of his colleagues in the Institute of Mining Engineers, H. Foster Bain, writes of him as one who, "while pioneering the West and carrying modern science down into the underground workings, found time to enjoy life and to think of other things than drills and stamp mills. Shockley was known to many of our members only as a persistent advocate of spelling reform; to others he stood as the explorer, familiar with all the odd corners of the world; to still others he was the careful accurate engineer; to those most fortunate he was known as the delightful companion familiar with the best in art, music and literature, a man with a rich mind well stocked by reading and wide experience, and as one of broad intelligent human interest."

In 1908 he married May Bradford, who testifies to his abiding interest in plants. "He was never separated from a botany press", she writes, and adds, "before we were married, when I traveled, some kind gentleman was always quite anxious to help me with the single suit-case I carried, but on my first journey with Mr. Shockley, not only did I have to carry my own suit-case but also the botany "jigger", for he always went equipped with his typewriter and four bags containing, among other things, dictionaries and books in Russian and Chinese, which he studied daily." It is interesting to note that he

kept a diary in which he made daily entries for a period of about fifty years.

The Shockleys went to Palo Alto to live in 1913, but later removed to Los Angeles where Mr. Shockley died May 26, 1925. [cf. biographies in "Engineering and Mining Journal", Aug. 14, 1920, p. 313, and "Engineering and Mining Journal-Press", vol. III, p. 1024, June 20, 1925.]

Charles Austin Stivers

Probably no two independent workers in botany would be likely to agree upon the specific limitations of any Californian species of Lupinus and their various forms with the exception of one species. That exception is Lupinus Stiversi, an annual of the higher foothills of the Sierra Nevada. With yellow banner and rose-pink wings it is a most beautiful species which is never mistaken by even the novice, nor confused with any other member of the genus. It was discovered by Lieutenant Charles Austin Stivers, U. S. A., at Summit Meadow on the Mariposa trail to Yosemite in or about the year 1862, and was named in his honor by Dr. Albert Kellogg (Proc. Cal. Acad. 2:192,—1862). Of Lieutenant Stivers little is known. He held the degree of Doctor of Medicine, and was at one time especially interested in the study of the marine algae. His name is mentioned occasionally in the pages of early proceedings of the Cal. Acad. Sci.

Charles Austin Stivers

Lucia A. Summers

For the first considerable plant collections made in San Luis Obispo County we are indebted to Lucia A. Summers. She was a native of Boston, Massachusetts, and married the Rev. R. W. Summers, an Episcopal clergyman, who was something of an ethnologist. They

lived in Oregon and Washington and finally from 1881 to 1898 in San Luis Obispo town, where Mr. Summers was rector of St. Stephens church. Here in this place they developed about their home a fine garden which was visited by many persons. Mrs. Summers collected the native plants of the region, especially around San Luis Obispo and Santa Margarita, and thus built up a local herbarium. Some interested person drew the attention of regent Phoebe Hearst of the University of California to the value of her herbarium, whereupon Mrs. Hearst purchased the collection and presented it to the University of California Herbarium. The specimens have in consequence often been cited in publications.

Mrs. Summers, aged fifty-nine years, died at Santa Cruz, December 27, 1898, surviving her husband only six months. During the period of her residence in San Luis Obispo she taught botany to the young people, and both she and her husband are still remembered as talented and cultured. One of her pupils, Mrs. Georgiana Parks Ballard, a charming woman of Paso Robles, has carried on amongst the people the work of preserving in the county an interest in the native plants. For most of the facts concerning Mrs. Summers I am indebted to Miss Ramona Reed of San Luis Obispo.

FOUR- AND FIVE-LEAVED CLUSTERS IN MONTEREY PINE

Ferdinand W. Haasis

In the course of examinations in the fall of 1930 of the needles of a Monterey pine (Pinus radiata Don) standing on the grounds of the Coastal Laboratory at Carmel, California, it was observed that a few of the leaves were in fascicles of 4 instead of the customary 3 or rarer 2. Four such fascicles were noted, all situated near the end of the 1929 growth on the main stem about 2.5 m above the ground. None were observed on the 6 branches of the whorl at the base of this internode. Further observation disclosed the fact that 4-leaved fascicles were not uncommon on the trees in this vicinity, although they were not found on all of the trees examined. While 4-leaved fascicles were not seen on six somewhat smaller trees within a radius of 10 meters of the tree where the occurrence was first observed, yet altogether 9 different trees were noted with needles in 4's, these trees being separated from one another by a maximum distance of 46 meters.

The occurrence of 4-leaved fascicles in these trees is not restricted to any one calendar year, having been observed on various individuals on the growth of the years 1925, 1927, 1929, and 1930. Most of such clusters, however, were found on the 1929 internodes, with a considerable number on the 1925 growth in the case of the one tree where such old leaves were found persisting. In addition to these 4-leaved clusters, a few 5-leaved fascicles were also seen, mostly on the 1925 growth of the tree just mentioned.

Although the greater number of the 4-leaved clusters were noted on the main stem, sometimes on vigorously growing trees, but at other